I-70 TRAFFIC & REVENUE STUDY
ROADWAY AND STRUCTURES WORKGROUP

MEETING MINUTES

► **Meeting Date:** ***Wednesday, October 23, 2013*** ► **Time:** ***9:00 am -11:00 pm***

► **Meeting Place:** ***Parsons Office, 1776 Lincoln St., Suite 600, Denver, CO 80203***
Independence Pass Conference Room

► **Distribution / Attendees (‣):**

‣ *John Braaksma*	*Parsons*	‣ *Julia Barker*	*Parsons*	‣ *Jill Donnelly*	*Parsons*
‣ *Brad Doyle*	*Parsons*	‣ *Tom Stelmack*	*Parsons*	‣ *Ralph Trapani*	*Parsons*
‣ *Rick Andrew*	*Yeh & Assoc.*	‣ *Lisa McDonald*	*Louis Berger Group*	‣	
‣ *David Singer*	*CDOT*	‣ *Steve Yip*	*CDOT*	‣	
‣		‣		‣	
‣		‣		‣	
‣		‣		‣	

	Technical Issue/Challenge	Solution	Client Benefits
1.	I-70 CSS requirements vs. governing agency (AASHTO, CDOT, etc.) design requirements	Modify roadway model template; apply to structures on a case-by-case basis	The roadway template will provide a visual representation of CSS limits vs. engineered limits for easy comparison. Bridges and walls will be as short as possible with assumptions noted.
2.	Define weave, direct connect, and other interchange types	Review ramp volume data	Direct connects will only be provided at higher-volume interchanges, saving costs and construction time.
4.			
3.			

I-70 TRAFFIC & REVENUE STUDY
ROADWAY AND STRUCTURES WORKGROUP

Meeting Notes

New Business

Topic #1 – Clear Creek County Submittal – November 5, 2013

- Parsons plans to submit 500 scale plots for the 2 and 3 managed lane options that will show: lane lines, barrier/guardrail locations, interchanges.
- Lines defining the Area of Potential Effects (APE) will not be shown. Right-of-way lines will be shown.
- The model template is undergoing a few modifications. The cross sections and linework will reflect both CSS limits and engineered limits (i.e., those defined using good judgment, AASHTO and/or CDOT criteria).
- Representative cross-sections will be provided a variety of locations in order to highlight the differences between CSS and engineered limits. Maximum Program improvements will be added by hand in a few locations to show that the alternates accepted in the PEIS also violate the CSS requirements.
- Brad presented preliminary interchange types based on ramp volumes provided by Apex. For volumes 1000-3000 cars, weaves are assumed. For 3000+ cars, direct connect (DC) structures are assumed. He provided a sketch of the dog bone interchange (I-70 over road crossed, two roundabouts at both ends, and directionality controlled by gates) for DC's that remain in the median and do not flyover either side of I-70.
- Parsons staff will start laying out the intersections and some changes may result.

Topic #2 – Floyd Hill to Hidden Valley – Managed Lanes

- We have a layout for the managed lanes on a viaduct through the canyon to Idaho Springs and I-70 is not modified. Another alternate attempts to straighten out I-70, but managed lanes remain on a separate alignment.
- Rick suggested looking at the area west of the current intersection to see if we could land on the ridge, traverse at-grade along the ridge, and pick the viaduct back up at Hidden Valley.

Topic #3 –3rd Bore at Eisenhower/Johnson Memorial Tunnels

- Current alignment splits from median in the 6% approach grade to the tunnel resulting in about a 3-mile bore through the ridge. Rick offered that we may need a cut and cover tunnel on the west end due to poor rock in that area. This may be an advantage for avalanche blasting: the managed lanes would be protected in the tunnel.
- Drainage should be fine since the profile would be headed down the other side of the divide.
- The west side of the tunnel does have a few patches of moonwart that would need to be avoided.

Topic #4 – CSS and Structure Layouts

- Julia wanted the group to be aware, that as we've found with the roadway design, the CSS requirements don't produce the most efficient bridge designs. The group agreed that CSS should be applied on a case-by-case basis. For instance, where views were critical, such as Shrine Pass, the CSS requirement should be followed. A tread lightly philosophy should be used elsewhere.
- The group agreed that a maximum 25' MSE wall height for bridge abutment fills was appropriate for this level of analysis.
- When costs are developed, reinforced soil abutments should be considered since most crossings are grade separations, and this is a CDOT preference.
- Rick offered that the SH 103 bridge replacement would not meet CSS criteria.

I-70 TRAFFIC & REVENUE STUDY
ROADWAY AND STRUCTURES WORKGROUP

Meeting Notes

Action Item Register attached.

These notes are an interpretation of discussions held. Please provide any additions or corrections to the originator within seven days of the date signed, otherwise they will be assumed correct as written.

► *Prepared By:* *Julia Barker* *Date:* *October 25, 2013*

Next Meeting: Pending Clear Creek County meeting on 11/21/13

I-70 TRAFFIC & REVENUE STUDY
ROADWAY AND STRUCTURES WORKGROUP

ACTION ITEM REGISTER

► ***Combined Workgroup***
Roadway (R), Structures (S)

► 10/23/2013

Item	Action	Responsibility	Due	Status
1S	Develop existing structure inventory.	J. Barker	10/07/13	Complete -10/23/13
2S	Provide Structure Inspection and Inventory Reports/inspection folders for existing structures in corridor.	S. Yip	10/14/13	Complete -10/10/13
3S	New structure delineation.	Barker/Braaksma	11/22/13	
4S	Maintain structures matrix that will contain basic structure data as well as notes on Performance Measures, design assumptions, etc.	Barker	Ongoing	
5S	Review SWEEP documents for information related to stream crossings.	Barker	10/31/13	
6S	Review ALIVE documents for location of animal crossings. Sizes TBD by Environmental group.	Barker	10/31/13	
7S	Send Steve column titles from existing structure matrix for comment.	Barker	10/24/13	Complete -10/24/13
1R	Prepare Clear Creek County exhibits: plan, profile, and select cross sections	Doyle	11/05/13	
2R	Add linework to Clear Creek exhibits for interchanges	Doyle	11/05/13	
3R	Provide Caliper and LBG necessary interchange information.	Doyle	11/15/13	